

## The National Energy Modeling System: An Overview 2003

### 2002 Overnight Capital Costs (including Contingencies), 2002 Heat Rates, and Online Year by Technology for the AEO2003 Reference Case

Technology	Capital Costs <sup>1/</sup> (2001\$/Kwhr)	2002 Heat Rates (Btu/Kwhr)	Online Year <sup>2/</sup>
Advanced Combustion Turbine	460	8,550	2004
Conventional Combustion Turbine	409	10,450	2004
Advanced Gas/Oil Combined Cycle	608	7,000	2005
Conventional Gas/Oil Combined Cycle	536	7,500	2005
Scrubbed Coal New	1,154	9,000	2006
Integrated Gas Combined Cycle	1,367	8,000	2006
Fuel Cells	2,137	7,500	2005
Advanced Nuclear	2,117	10,400	2007
Biomass	1,763	8,911	2006
Solar Thermal	2,594	10,280	2005
Solar Photovoltaic	3,915	10,280	2004
Wind	1,003	10,280	2005

<sup>1/</sup>Overnight capital cost include contingency factors, and exclude regional multipliers and learning effects. Interest charges are also excluded. These represent costs of new projects initiated in 2002.

<sup>2/</sup>Online year represents the first year that a new unit could be completed, given an order date of 2002.